



(43) International Publication Date
6 January 2005 (06.01.2005)

PCT

(10) International Publication Number
WO 2005/001676 A3

- (51) **International Patent Classification⁷:** **G06F 3/033**,
G09F 9/37

(21) **International Application Number:**
PCT/IB2004/050987

(22) **International Filing Date:** 23 June 2004 (23.06.2004)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**
60/482,949 27 June 2003 (27.06.2003) US

(71) **Applicant (for all designated States except US):** **KONINKLIJKE PHILIPS ELECTRONICS, N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(71) **Applicant (for AE only):** **U.S. PHILIPS CORPORATION** [US/US]; 1251 Avenue of the Americas, New York, New York 10020 (US).

(72) **Inventors; and**

(75) **Inventors/Applicants (for US only):** **CORTENRAAD**, Hubertus, M., R. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL). **BERGMAN, Anthonie, H.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

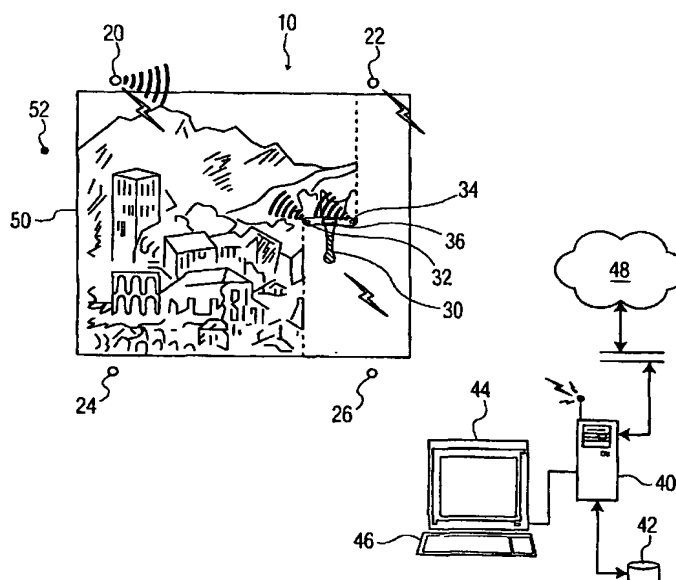
(74) **Common Representative:** **KONINKLIJKE PHILIPS ELECTRONICS, N.V.;** c/o KEEGAN, Frank, P.O. Box 3001, Briarcliff Manor, NY 10510-8001 (US).

(81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

[Continued on next page]

- (54) Title:** ADAPTABLE ULTRASOUND POSITIONING SYSTEM FOR AN ELECTRONIC BRUSH



- (57) Abstract:** The invention provides a system for activating an electronic paint including at least two independently movable ultrasonic transducers (20,22), an electronic brush (30) including an electronic-brush ultrasonic transducer (32), and a controller (40). The controller (40) is operably coupled to the two independently movable ultrasonic transducers (20,22) and the electronic-brush ultrasonic transducer (32). An electronic-brush location with respect to locations of the independently movable ultrasonic transducers (20,22) is determined from ultrasonic signals communicated between the ultrasonic transducers (20,22) and received by the controller (40).



FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
26 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.